



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,301	08/01/2006	Piet Barten	5100-000025/US	1890
30/593 7590 07/20/2009 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195				
EXAMINER MCELWAIN, ELIZABETH F				
ART UNIT		PAPER NUMBER		
1638				
MAIL DATE		DELIVERY MODE		
07/20/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/553,301

Applicant(s)

BARTEN, PIET

Examiner

Elizabeth F. McElwain

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 14-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-13 and 20 in the reply filed on April 24, 2009 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Objections

Claim 1 is objected to for having two subsections labeled "a)".

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-13 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, and claims 2-13 and 20 dependent thereon, are indefinite in the recitation of "at least glucoiberin . . . and/or glucoraphanin", given that the claim requires that there be certain concentrations of each of these in the Brassical plant. Therefore, the use of "or" with regard to the glucoraphanin is inconsistent.

Claim 1, and claims 2-13 and 20 dependent thereon, are indefinite in that it is unclear if the levels of glucoiberin and glucoraphanin set forth in the claims are describing the

Brassica plant used in the breeding process or are describing Brassica varieties that are produced by the breeding process. Therefore, the metes and bounds of the claimed invention cannot be determined.

4. Claim 1 provides for the use of a Brassica oleracea plant, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 101

Claim 1 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mithen et al (US Patent 6,340,784).

7. The claims are drawn to a method of providing a plant with elevated levels of anticarcinogenic glucosinolates, by providing a *Brassica oleracea* plant to breed *Brassica* varieties with at least 100micromol 3MSPG per 100gm fresh weight of the edible part and greater than 50micromol 4MSPG per 100 gm fresh weight of the edible part. Additional claims recite other amounts of each of 3MSPG and 4 MSPG, and specify certain varieties of *Brassica oleracea*.

8. Mithen et al teach a method of providing a plant with elevated levels of anticarcinogenic glucosinolates, by providing a *Brassica oleracea* plant, such as Green Duke broccoli (GD DH) and wild species of *B. oleracea* to breed *Brassica* varieties with elevated levels of anticarcinogenic glucosinolates, such as 3MSPG (MSP) and 4MSBG (MSB) (columns 6-8 and 11-13, for example). It is noted that Table 1 sets forth concentrations of the glucosinolates in micromole per gram of dry weight, while the claims are drawn to micromole per 100 gram of fresh weight of edible parts of the *Brassica* plant.

9. Mithen et al do not specifically teach the levels of 3MSPG and 4 MSPG anticarcinogenic glucosinolates per 100 gram fresh weight of edible parts of the *Brassica* that are specified in the claims.

10. Given the teachings of Mithen et al of the desirability of producing edible *Brassica oleracea* plants having elevated levels of anticarcinogenic glucosinolates, such as 3MSPG and 4MSBG by crossing *Brassica* varieties and selecting the progeny having high levels of 3MSPG or 4MSBG, and backcrossing for one or more generation to select for desired levels of the anticarcinogenic glucosinolates, it would have been obvious to one of ordinary skill in the art at the time the invention was made to produce edible parts of *Brassica oleracea* plants with high levels of anticarcinogenic glucosinolates, such as anticarcinogenic glucosinolates, and the

particular concentrations of 3MSPG and 4MSPG in 100 gram of fresh weight edible parts would be the result of optimizing process parameters. Thus the claimed invention would have been prima facie obvious as a whole to one of ordinary skill in the art at the time the invention was made.

Conclusion

11. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth F. McElwain whose telephone number is (571) 272-0802. The examiner can normally be reached on increased flex time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/553,301
Art Unit: 1638

Page 6

EFM

/Elizabeth F. McElwain/
Primary Examiner, Art Unit 1638